

December 28, 2017

RE: GN Docket No. 17-258: Citizens Broadband Radio Service

Dear Chairman Ajit Pai and all Members of the FCC Commission,

Chairman Pai, we met in Warsaw, VA – 10/30/2017 at the Rural Broadband Task Force Meeting. *(I was the guy who made the comment in the coffee house about the smell... then addressed you on the CBRS Proposed Rule Changes in the meeting.)*

Thank you for attending this local meeting and thank you for hearing me out. Offering your time and willingness to meet on a local level shows your level of involvement in addressing the rural digital divide.

In that Task Force meeting, I discussed how changing the rules to favor licensing based on the larger PEA territories will deliver a negative blow to the WISP industry. By now you have received all the reasons from our WISPA colleagues so I won't dwell on what you already know and what you have already read. Instead, I'd like to circle back on what I mentioned to you in that meeting.

During the Task Force meeting, you were sitting directly under the Northern Neck Electric Cooperative's tower that VABB uses to propagate the 3650MHz frequency under our nationwide call sign WQHW446. VABB is presently serving over 20 customers from that tower since deploying it 4 months ago. We anticipate at least 100 customers will be served from this tower using CBRS-READY technology. VABB is also using this frequency on 3 other towers and have been approved for 5 more... anticipating well over 500 rural citizens will be in-service with 3650MHz technology in 2018. If this rule changes in 2018 and is instituted by 2019, VABB stands to lose;

- a large CAPEX on what has already been deployed,
- another large CAPEX to replace the 3650MHz gear with unlicensed (noisy) frequencies, that may not even reach some of these none-line-of-sight customers,
- the likelihood of terminating viable Internet service and leaving these rural citizens without adequate Internet because we could not compete for the PEA territorial licensing rights,
- the number of rural citizens VABB will cease to enroll knowing that the fate of our CBRS participation hangs in the balance.

As a small business trying to do right by offering Internet service in areas unreachable and unattractive to the large carriers, VABB simply cannot afford to be caught-up in a mid-stream rule change and potentially have to shift gears to accommodate the many citizens screaming for high-speed internet.

Why should you care about a small ISP... or about WISPs in general? Why should the FCC NOT consider the CTIA and T-Mobile rule change request? Why should the FCC focus on finding a strong mid-band frequency or TVWS spectrum for rural WISPs to use to finally solve the problem? I'll tell you why.

- 1) It's no secret the cellular carriers will eventually get deep into rural areas by using their legislative persuasion and deep private and governmental funds to obtain the best frequencies (ATT's FirstNet, TVWS reverse auctions, reduced 5.8GHz outer bands, high-bid 2.5GHz EDU bands, etc...). But... it will

take them years to build-out and still will not reach many rural areas. Our rural citizens do not have years to wait, that's a generation of children without. They have already waited long enough.

- 2) Large towers are not being constructed in rural areas due to public resistance and/or zoning limitations. Then, when towers are built, large carriers won't occupy them due to the low housing density or due to the fact it's not near a major highway. (We are witnessing that right now in an area called Boston in Culpeper County, VA).
- 3) Even if large towers are built, they simply do not reach into the nooks, valleys, and behind hills. That's what WISPs specialize in... using "MicroSpots" to repeat service in remote/isolated areas. (VABB won a 2017 grant from Microsoft to deploy 9 MicroSpots in hard-to-reach areas.)
- 4) The cable industry refuses to reach every single home. If you are more than a few hundred feet from the main road, you will not get cable. If you live several miles from the nearest home, you will not get cable. If you are in an over-subscribed or on an older cable build-out, you have no other option but to have inferior cable service.
- 5) Satellite Internet has improved, but the laws of physics still plays a part in delivering a high-latency/slow speed service compared to fixed terrestrial wireless Internet. And we don't have 10 years to wait for Mr. Musk, Sir Branson, or Mr. Zuckerberg to deploy their constellation of low-orbiting satellites, which will still have limitations.

For these reason Mr. Pai, you must reconsider changing the CBRS rules, and in fact, the FCC should be focusing on ways to help the WISP industry grow by providing a frequency like 3650MHz and TVWS spectrum to WISPs at a fair licensing fee and fair licensing territories by county. County officials are begging WISPs to come into their areas and are offering incentives to do so. That's why it makes sense to use census tracts and census blocks per county as the territory markers and NOT use the PEA metro/rural mixed territories, it just does not make sense (see examples in the attached map).

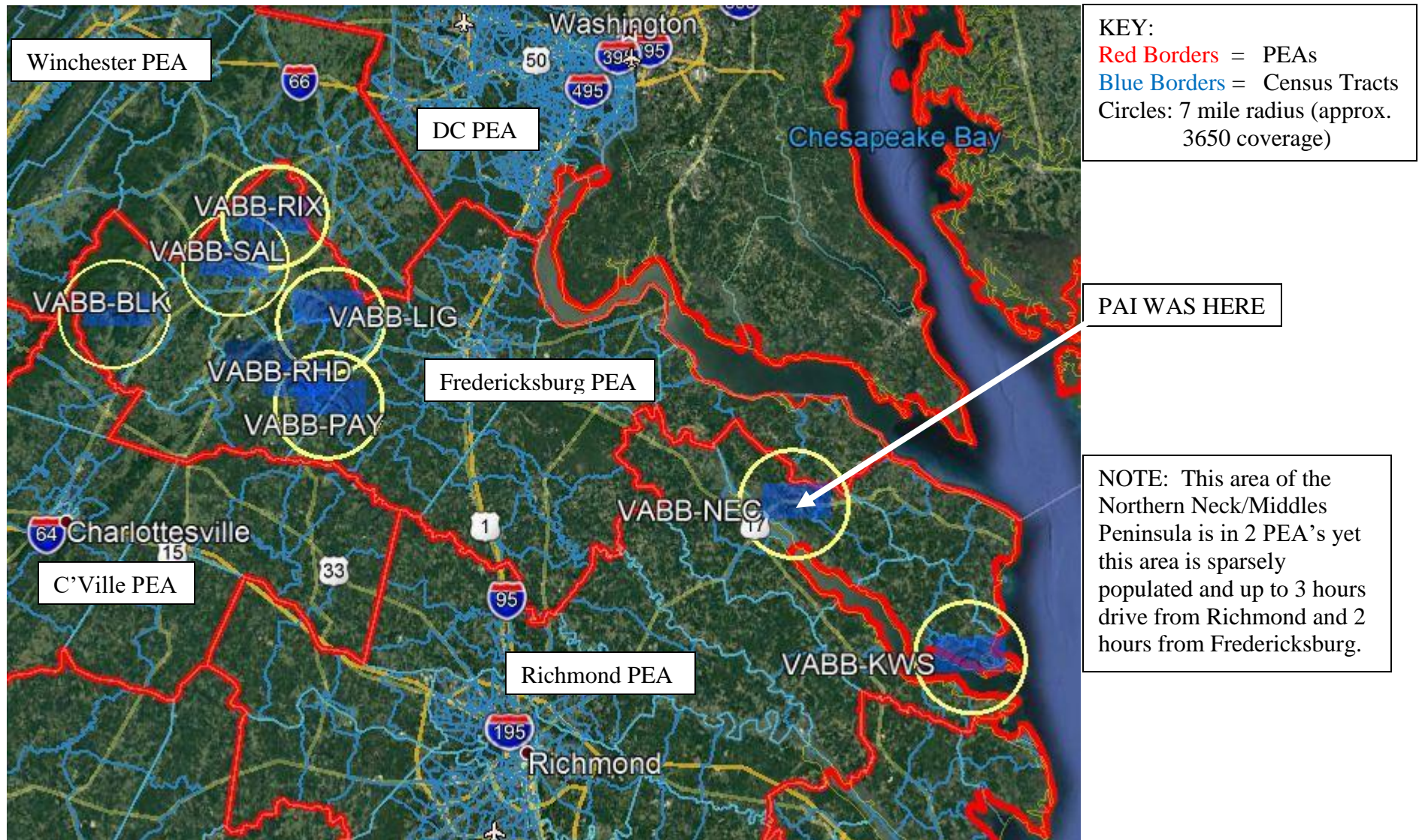
In the past few years, the WISP Industry has been invited to the FCC "discussion tables" (thank you), have spoken at hearings, and have provided a clear case of what we are collectively doing to bridge the rural digital divide. We are sparking economic growth, hiring staff, adding to the tax base of local governments, and through our high-speed wireless Internet services, we are enriching the lives of several million people who choose to live in rural America.

The FCC has asked for our industry's input and we are again providing it by respectfully requesting that this Commission commit to the CBRS road map envisioned over two years ago and OPPOSE the "*Petitions for Rulemaking filed by CTIA and T-Mobile requesting changes to the rules governing the Citizens Broadband Radio Service*" (GN Docket NO. 12-354).

In conclusion, give WISPs the spectrum tools needed and a clear directive to the manufacturers, so they can plan and supply the lowest cost equipment through mass production and industry adoption. As an industry, we will thrive and serve our rural communities, fulfill the promise of our elected officials, enhance millions of lives, add revenue to our economy, and catch-up with the rest of the "Wireless World".

Respectfully submitted,
Joe Lenig
Head of Impact
Virginia Broadband, LLC "VABB"
540-727-2863 (direct)

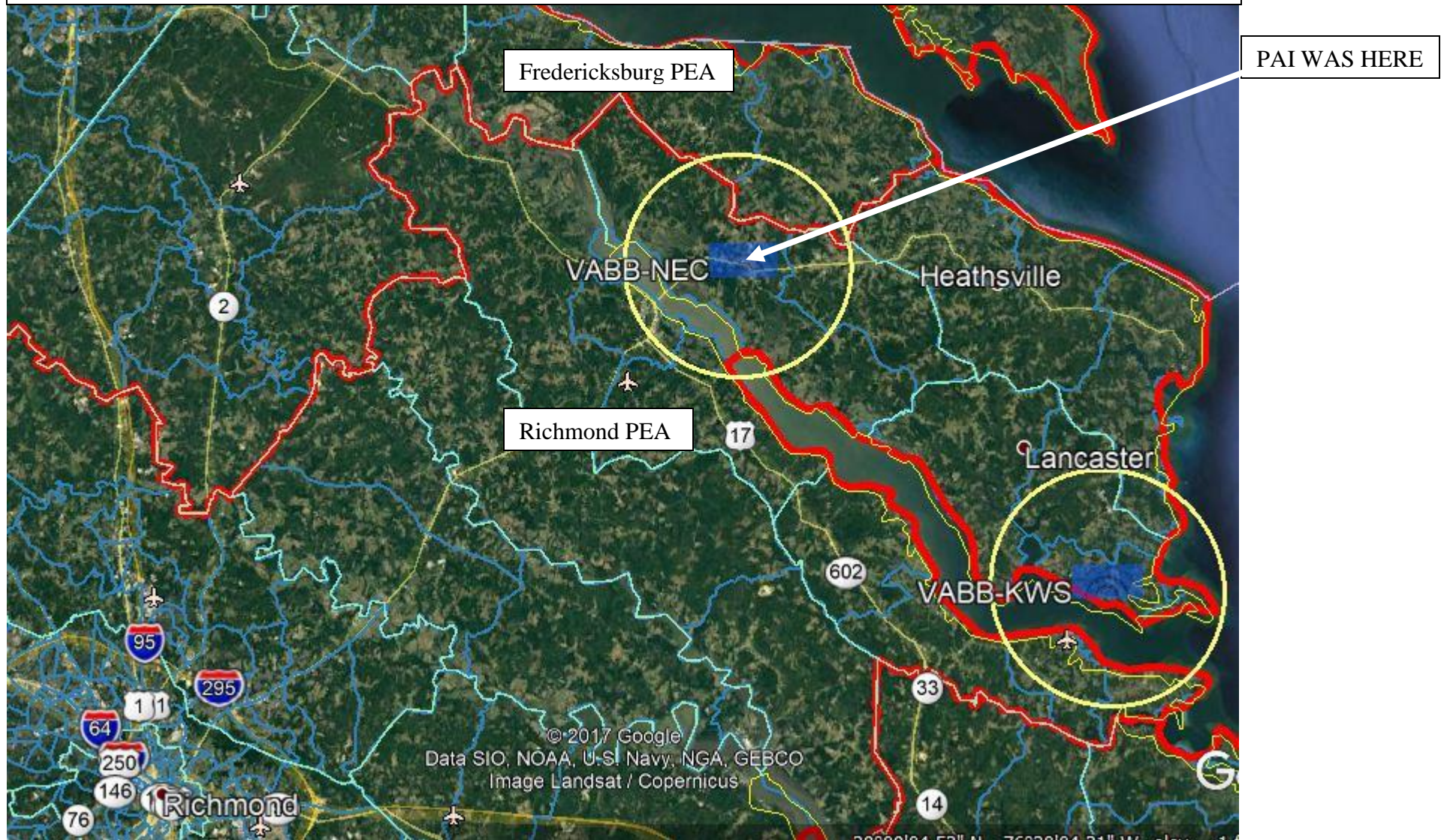
VABB 3650 "CBRS-READY" SITES:

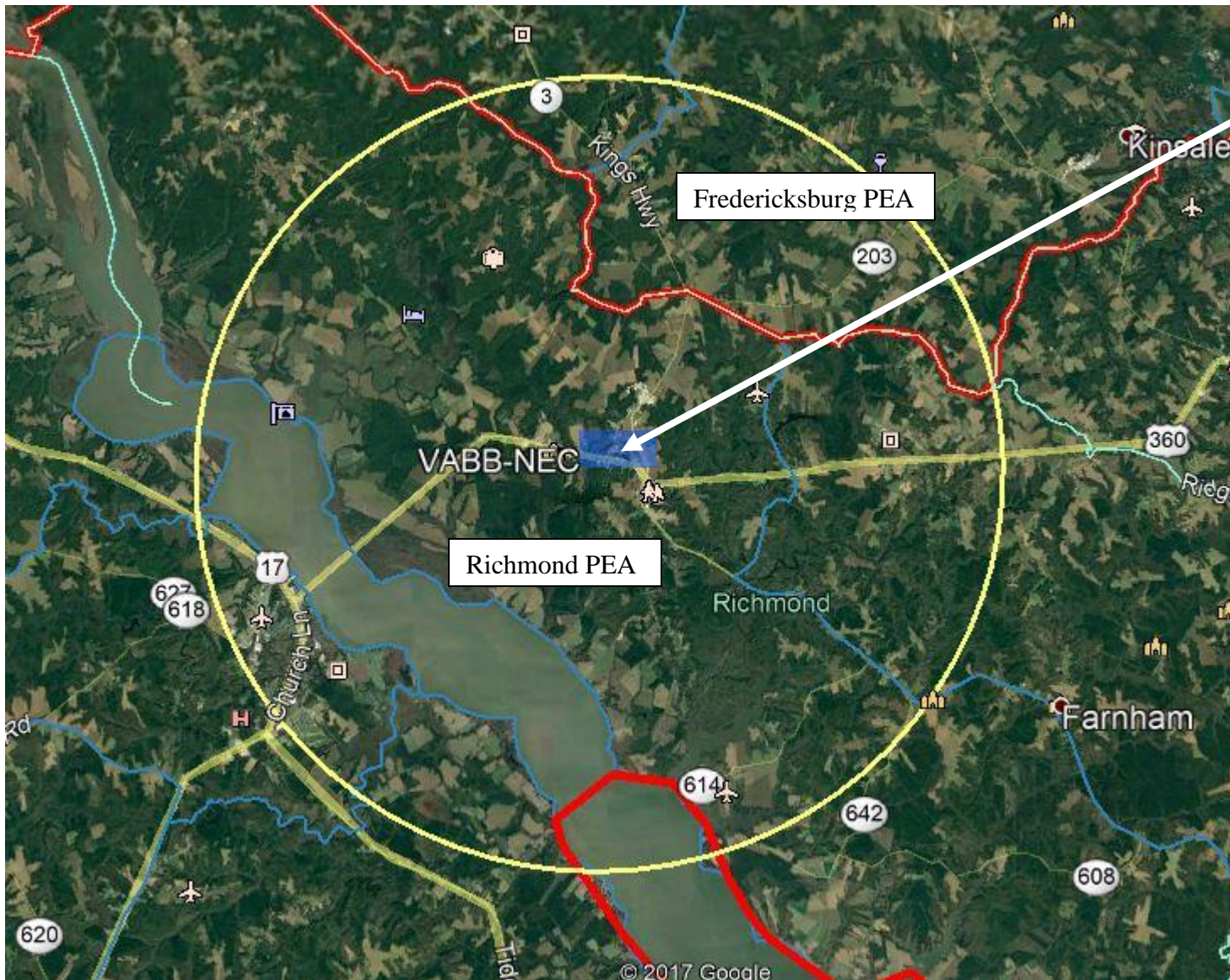


Note: VABB-NEC reaches into:

- 6 or 7 Census Tracts
- 4 Counties
- 2 PEAs with urban areas over an hour away

Which territory would best represent and best determine the needs of these sparse, rural, remote homes?





PAI WAS HERE

Note: Observe the massive open areas. There are very few towers in this area and doubt more will be built. The only way to reach the people that the incumbent cable company won't reach is by wireless WISP wireless technology.